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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,261	11/03/2003	Jui-Feng Ko	JCLA7806	6081

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J C PATENTS, INC.
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IRVINE, CA 92618

EXAMINER

SHERMAN, STEPHEN G

ART UNIT	PAPER NUMBER
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2629

DATE MAILED: 08/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/701,261	Applicant(s) KO ET AL.	
	Examiner Stephen G. Sherman	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the amendment filed the 17 July 2006. Claims 1-7 are pending.

Response to Arguments

2. Applicant's arguments filed the 17 July 2006 have been fully considered but they are not persuasive.

On page 6, under the heading "Discussion of Rejections Under 35 USC 102(e)" the applicant argues the rejection of claim 7 based on Figure 7 of Sha (US 6,980,581). The applicant states that the range of 10 modulation cycles in Sha is not equivalent to a "spread out width" in the above patentable claim limitation because the inherent shape of the data obtain via the loop from s208 to s216 in Figure 7 is different from that of an embodiment of the present invention, and that Sha teaches of a different algorithm that control the gain of a VCO and adjust the gain function and thus does not teach nor require the reduction of peak values based upon the "spreading out width" method as claimed in the above claim limitation. The examiner respectfully disagrees.

The claimed limitation states: "determining a specified frequency of the electromagnetic interference signal and a corresponding spread out width at that frequency according to an algorithm; and spreading out the electromagnetic interference signal according to the spread out width using the specified frequency as

the center of spreading.” The claim does not say that the algorithm is what is determined the spread out width but only that it is determined “according to an algorithm.” As the examiner stated in the rejection, Figure 5 of Sha shows that the feedback divider 116 receives Vout, where Vout is created according to an algorithm, from the AGO VCO 108 which then produces the signal FEEDBACK which is input into the spread spectrum circuitry 118 for determining the spread out width at the specified frequency, as explained in column 4, lines 13-26, which also states that the ROM codes are optimized for the frequency Fout such that the spread spectrum circuitry can properly spread out the width using the frequency Fout as the center frequency. Therefore the spread out width is determined “according to an algorithm.” If it is the applicant's intention that the algorithm is what is determining the spread out width, then it should be clearly stated in the claim that this is what is occurring.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Sha et al. (US 6,980,581).

Regarding claim 1, Sha et al. disclose a control chip built inside an integrated circuit for reducing electromagnetic interference (Figures 4 and 5), wherein the control chip is able to spread out the frequency of an electromagnetic interference signal according to an algorithm (Figure 5, shows that the feedback divider 116 receives V_{out} from the AGO VCO 108, where V_{out} is created according to an algorithm, which then produces the signal FEEDBACK which is input into the spread spectrum circuitry 118 for determining the spread out width at the specified frequency as explained in column 4, lines 13-26.), and the electromagnetic interference signal at each frequency are modulated according to a corresponding spread out width (Column 4, lines 13-26 explain that the ROM codes are optimized for the frequency F_{out} such that the spread spectrum circuitry can properly spread out the width using the frequency F_{out} as the center frequency.).

Regarding claim 7, Sha et al. disclose a method of reducing the strength of an electromagnetic interference signal, comprising the steps of:

receiving an algorithm (Figures 5 and 7 and column 4, lines 39-56 explain that AGO VCO 108 receives a computer program, or algorithm as shown in Figure 7, and as

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explained in column 5, lines 30-39 if the computer program is stored then the AGO VCO 108 would have to receive the algorithm from the storage.);

determining a specified frequency of the electromagnetic interference signal and a corresponding spread out width at that frequency according to the algorithm (Figure 5, shows that the feedback divider 116 receives Vout from the AGO VCO 108 which then produces the signal FEEDBACK which is input into the spread spectrum circuitry 118 for determining the spread out width at the specified frequency as explained in column 4, lines 13-26.); and

spreading out the electromagnetic interference signal according to the spread out width using the specified frequency as the center of spreading (Column 4, lines 13-26 explain that the ROM codes are optimized for the frequency Fout such that the spread spectrum circuitry can properly spread out the width using the frequency Fout as the center frequency.).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sha et al. (US 6,980,581) in view of Yavitz (US 2003/0033385).

Regarding claim 2, Sha et al. disclose the control chip of claim 1.

Sha et al. fail to teach that the control chip picks up the algorithm from an external bus.

Yavitz discloses of a control chip which picks up an algorithm from an external bus (Figure 2 shows that the card 30 picks up application software 76 from an external bus 43 to be applied to the PLL 64 as explained in paragraph [0027].).

Therefore it would have been obvious to “one of ordinary skill” in the art at the time the invention was made that the computer program used by the control chip taught by Sha et al. would be received from an external bus as taught by Yavitz such that a separate memory for the computer program would not be needed inside the control chip in order to allow for the conservation of space for the control chip such that the control chip can be made smaller.

Regarding claim 3, Sha et al. disclose a control chip for reducing electromagnetic interference, comprising:

a software phase lock loop (Figure 5, item 100. The examiner interprets that since the PLL shown uses an algorithm, as explained in the rejection of claim 1, that it is a SPPL.) built inside the control chip for receiving a clock signal (Figure 5, the phase detector 110 receives REF 102 as explained in column 4, lines 2-3. Column 3, lines 35-46 explain that the output signal Fout is a spread spectrum clock signal with a mean frequency determined by the frequency for the signal REF, and if the signal REF has a frequency then it is a clock signal.) and spreading out the frequency of an electromagnetic interference signal according to an algorithm (Please refer to the explanation used in the rejection of claim 1.), wherein the electromagnetic interference signal at each frequency are modulated according to a corresponding spread out width (Column 4, lines 13-26 explain that the ROM codes are optimized for the frequency Fout such that the spread spectrum circuitry can properly spread out the width using the frequency Fout as the center frequency.).

Sha et al. fail to teach that the control chip comprises a bus coupled to the software phase lock loop for inputting the algorithm.

Yavitz discloses of a control chip which picks up an algorithm from an external bus (Figure 2 shows that the card 30 picks up application software 76 from an external bus 43 to be applied to the PLL 64 as explained in paragraph [0027].).

Therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made that the computer program used by the control chip taught

by Sha et al. would be received from an external bus as taught by Yavitz such that a separate memory for the computer program would not be needed inside the control chip in order to allow for the conservation of space for the control chip such that the control chip can be made smaller.

Regarding claim 4, Sha et al. and Yavitz disclose the control chip of claim 3.

Sha et al. also disclose wherein the frequency of the electromagnetic interference signal and the spread out width at that frequency is set by the algorithm within the software phase lock loop (Please refer to the explanation used in the rejection of claim 7.).

Regarding claim 5, Sha et al. disclose an application specific integrated circuit for reducing electromagnetic interference, comprising:

a first input terminal for receiving a clock signal (Figure 5, the phase detector 110 contains an input terminal which receives REF 102 as explained in column 4, lines 2-3. Column 3, lines 35-46 explain that the output signal Fout is a spread spectrum clock signal with a mean frequency determined by the frequency for the signal REF, and if the signal REF has a frequency then it is a clock signal.); and

a software phase lock loop coupled to the first input terminal (Figure 5 shows the SPL 100 which receives signal REF as explained above.) for spreading out the frequency of an electromagnetic interference signal according to the clock signal and an algorithm (Please refer to the explanation used in the rejection of claim 1.), wherein the

electromagnetic interference signal at each frequency are modulated according to a corresponding spread out width (Column 4, lines 13-26 explain that the ROM codes are optimized for the frequency F_{out} such that the spread spectrum circuitry can properly spread out the width using the frequency F_{out} as the center frequency.).

Sha et al. fails to teach of a second input terminal for receiving the algorithm.

Yavitz discloses of a control chip which picks up an algorithm from an external bus of which is input into an input terminal of a PLL (Figure 2 shows that the card 30 picks up application software 76 from an external bus 43 to be applied to the PLL 64 as explained in paragraph [0027].).

Therefore it would have been obvious to "one of ordinary skill" in the art at the time the invention was made that the computer program used by the integrated circuit taught by Sha et al. would be received from an external bus as taught by Yavitz such that the integrated circuit would receive the algorithm at a second input terminal in order to allow for the conservation of space for the control chip such that the control chip can be made smaller while still allowing for the proper functionality of the circuit.

Regarding claim 6, this claim is rejected under the same rationale as claim 4.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen G. Sherman whose telephone number is (571) 272-2941. The examiner can normally be reached on M-F, 8:00 a.m. - 4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amr Awad can be reached on (571) 272-7764. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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2 August 2006

AMR A. AWAD
PRIMARY EXAMINER
